

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-29 (Cancelled)

30. (currently amended) A composite (M) comprising:

a) at least 75 vol% of a mixed electronic/oxygen O²⁻ anionic conducting compound (C₁) chosen from doped ceramic oxides which, at the use temperature, are in the form of a crystal lattice having oxide ion vacancies and more particularly in the form of a cubic phase, fluorite phase, aurivillius type perovskite phase, brown-millerite phase or pyrochlore phase, compound (C₁) being a perovskite compound of formula:

- 1) La_(1-x-u)Sr_xAl_uFe_(1-v)Ti_vO_{3-δ}
- 2) La_(1-x-u)Sr_xAl_uFe_(1-v)Ga_vO_{3-δ}
- 3) La_(1-x)Sr_xFe_(1-v)Ti_vO_{3-δ}
- 4) La_(1-x)Sr_xTi_(1-v)Fe_vO_{3-δ}
- 5) La_(1-x)Sr_xFe_(1-v)Ga_vO_{3-δ} or
- 6) La_(1-x)Sr_xFeO_{3-δ}

where:

0 < x ≤ 0.5;

0 ≤ u ≤ 0.5;

(x + u) ≤ 0.5;

0 ≤ v ≤ 0.9;

0 ≤ w ≤ 0.9;

0 ≤ (y + v) ≤ 0.9; and

w is such that the structure in question is electrically neutral; and

b) from 0.01 to 25 vol% at least 0.1 vol% but not more than 10 vol% of a compound (C₂), different from compound (C₁), chosen from ceramics of oxide type, ceramics of nonoxide type, metals, metal alloys or mixtures of these various types of materials chosen from oxide-type materials, calcium oxide (CaO), aluminum oxide (Al₂O₃), zirconium oxide (ZrO₂), titanium oxide (TiO₂), mixed strontium aluminum oxides SrAl₂O₄ or Sr₃Al₂O₆, mixed barium titanium oxide (BaTiO₃), mixed calcium titanium oxide (CaTiO₃), La_{0.5} Sr_{0.5} Fe_{0.9} Ti_{0.1} O_{3-δ} or La_{0.6} Sr_{0.4} Fe_{0.9} Ga_{0.1} O_{3-δ}; and

c) from 0 vol% to 2.5 vol% of a compound (C₃) produced from at least one chemical reaction represented by the equation:



in which equation F_{C1}, F_{C2} and F_{C3} represent the respective crude formulae of compounds (C₁), (C₂) and (C₃) and x, y and z represent rational numbers greater than or equal to 0.

31. (currently amended) The composite of claim 30, in which [[the]] grains of compound (C₂) have an equiaxed shape with a diameter ranging from 0.1 μm to 5 μm and preferably less than 1 μm.

32. (Previously presented) The composite of claim 30, in which the volume fraction of compound (C₃) does not exceed 1.5% and more particularly does not exceed 0.5% by volume.

33. (Previously presented) The composite of claim 32, in which the volume fraction of compound (C₃) in the composite tends toward 0.

34. (canceled)

35. (Previously presented) The composite of claim 34, in which the volume fraction of compound (C₂) does not exceed 5%.

36. (canceled)

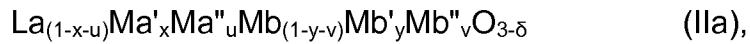
37. (withdrawn) The composite of claim 30, in which compound (C₂) is chosen from materials of the nonoxide type and preferably from silicon carbide (SiC), boron nitride (BN), nickel (Ni), platinum (Pt), palladium (Pd) and rhodium (Rh).

38. (canceled)

39. (canceled)

40. (canceled)

41. (Previously presented) The composite of claim 40, in which compound (C₁) is chosen from compounds of formula (IIa):



corresponding to formula (II), in which Ma represents a lanthanum atom.

42. (Previously presented) The composite of claim 40, in which compound (C₁) is chosen from compounds of formula (IIb):



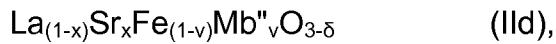
corresponding to formula (II) in which Ma' represents a strontium atom.

43. (Previously presented) The composite of claim 40, in which compound (C₁) is chosen from compounds of formula (IIc):



corresponding to formula (II) in which Mb represents an iron atom.

44. (Previously presented) The composite of claim 40, in which compound (C₁) is chosen from compounds of formula (IId):



corresponding to formula (II) in which u = 0, y = 0, Mb represents an iron atom, Ma represents a lanthanum atom and Ma' represents a strontium atom.

45. (canceled)

46. (currently amended) The composite of claim [[45]] 30, of formula:

- a) La_{0.6} Sr_{0.4} Fe_{0.9} Ga_{0.1} O_{3-δ}, or
- b) La_{0.5} Sr_{0.5} Fe_{0.9} Ti_{0.1} O_{3-δ}.

47. (canceled)

48. (canceled)

49. (canceled)

50. (new) The composite of claim 30, wherein compound (C₂) is MgO.